Presentation Abstract

Add to Itinerary

Print

Presentation:	182 - Evaluation of the wild and domestic pig interactions and their association with African swine fever outbreaks using structured questionnaires and spatio-temporal modeling.
Location:	Uxmal 1 (5)
Pres. Time:	Thursday, Nov 05, 2015, 10:45 AM -11:00 AM
Category:	+B4. Spatial epidemiology

Author(s): **Esther A. Kukielka**[1], Ferrán Jori Massanas[2], Beatriz Martínez López[1], David Chavernac[3], Charles Masembe[4], Tony Aliro[5], Karl Ståhl[6], [1]University of California, Davis, Davis, CA, [2]CIRAD, Gaborone, Botswana; [3]CIRAD, Montpellier, France; [4]Makerere University, Kampala, Uganda; [5]Ministry of Agriculture, Gulu, Uganda; [6]Swedish University of Agricultural Science, Uppsala, Sweden.
Contact: ekukielka@ucdavis.edu

Abstract: **Purpose:** Bushpig (*Potamochoerus larvatus*) and warthog (*Phacochoerus africanus*) are African swine fever (ASF) asymptomatic carriers widely distributed in Eastern Africa. Unlike warthogs (WH), which seem to only transmit the virus through tick vectors, experimental evidence suggests that bushpigs (BP) can transmit ASF virus by direct contact to susceptible domestic pigs (DP). However, being an elusive nocturnal species, the level of interaction and potential risk factors for ASF transmission from BP to DP still remains to be elucidated. This study explores the spatio-temporal dynamics of direct and indirect interactions between wild and domestic pigs and their association with reported ASF occurrence in DP.
Methods: The study area comprises the northern boundary of Murchison Fall National Park, Uganda, and the adjoined rural communities -characterized by a growing free ranging DP population and unremitting ASF outbreaks. A census of households-rearing DP during 2014 was created by consulting local village leaders and a random sample of 233 households was selected and surveyed using structured interviews on PDAs. Questions aimed at understanding and assessing the nature, frequency, duration and distribution of interactions between wild and domestic pigs at their interface with special emphasis on BP. Questions regarding human behavior related with DP rearing activities that pose a risk of transmission at the interface (i.e., carcass dressing) were also included. Based on responses, BP's home ranges were estimated by using kernel density estimates and hotspots for BP-DP interactions were identified.
Results:
Preliminary results suggest that 27.2% households reported presence of BP in their area, of which only 17.5% reported more than 20 per year, suggesting that the sylvatic and the non-sylvatic cycle of ASF may not be interlinked in northern Uganda.
Conclusions:
BP-DP dynamics and association with ASF occurrence will be discussed.
Relevance: ASF is an important disease that hinders pig production from becoming a tool for poverty alleviation in the area, one of the poorest of Uganda. Tackling possible reservoirs such as wild pigs must be attained.